

RECEIVED
CENTRAL FAX CENTER

OCT 16 2006

REMARKS

The Applicants respectfully request reconsideration of this application in view of the above amendments and the following remarks.

Notice of Other Patent Applications

The Applicants want to put the Examiner on notice that there are other pending patent applications disclosing similar subject matter as the present patent application. The patent applications include 10/769,601 and 10/769,603.

35 U.S.C. §112 Rejection

Claim 27 has been rejected under 35 U.S.C. 112, first paragraph. In particular, the Examiner has asserted that "[t]here is no support in the specification of a composition with a compound of formula I and further comprising tuberculosis in the diluent".

Applicants respectfully disagree. Paragraph [0020] of the present patent application discloses:

[0020] A potential problem with known germicides that are already being used in commerce is that microorganisms may become resistant to the germicides. Microorganisms, such as tuberculosis (emphasis added), which were once relatively easy to kill, may become more resistant to the germicides, and correspondingly more difficult to kill. Certain bacteria are already becoming resistant to glutaraldehyde. New germicides with even small structural differences from known or currently employed germicides may counteract or compromise the microorganisms resistance or tolerance. As such, the new germicides disclosed herein may greatly advance the arts of disinfection and sterilization (emphasis added).

Accordingly, the present patent application discloses that the germicides disclosed therein may be used to kill tuberculosis among other microorganisms. The specification also discloses that the tuberculosis or other microorganisms are contacted with the

Atty Docket No. 56301P5007
Application No. 10/769,598

7

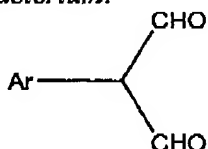
germicidal compositions during the killing process. Accordingly, Applicants respectfully request that the rejection be withdrawn.

35 U.S.C. §102(b) Rejection - Klimko

The Examiner has rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by the article "*Functional Derivatives of Malodialdehydes and Their Reactions*", published in Zhurnal Obshchei Khimii, 1959, 29, pg. 4027-4029, by Klimko et al. (hereinafter referred to as "Klimko"). Applicants respectfully submit that present claim 1 is not anticipated by Klimko.

Claim 1 recites a germicidal composition comprising:

"a diluent;
an amount of a compound of the following formula effective to kill
mycobacterium:



wherein Ar is an aryl group selected from the group consisting of phenyl, 4-pyrimidinyl, and 2-(2-nitro-3-formyl-phenyl); and
a corrosion inhibitor".

Klimko does not teach or suggest this germicidal composition. In particular, Klimko does not teach or suggest the corrosion inhibitor. Furthermore, Klimko does not teach or suggest that phenylmalonaldehyde is effective to kill mycobacterium.

Accordingly, claim 1 is believed to be allowable over Klimko. The claims that depend from claim 1 are believed to be allowable therefor, as well as for the recitations set forth in each of these dependent claims.

35 U.S.C. §103(a) Rejection - Klimko, in view of Yagi, Bratescu, and Duran-Patron

The Examiner has rejected claims 3-4, 7-8, 10, 19-20, 22-23 and 25-26 under 35 U.S.C. §103(a) as being obvious over Klimko as applied to claim 1 in view of U.S. Patent No. 6,429,220B1 to Yagi et al. (hereinafter "Yagi"), U.S. Patent Application 2004/0071653A1 by Bratescu et al. (hereinafter "Bratescu"), and the article "*Structure-Activity Relationships of New Phytotoxic Metabolites with Botryane Skeleton from Botrytis cinerea*", Tetrahedron, 55, 1999, pp. 2389-2400, by Duran-Patron et al. (hereinafter "Duran-Patron").

Applicants respectfully submit that Klimko should not be combined with either of Yagi, Bratescu, or Duran-Patron. Klimko does not teach or reasonably suggest that phenylmalondialdehyde is germicidal let alone that it is effective to kill mycobacterium.

This point does not seem to be of dispute, and rather the Examiner has asserted that a person of ordinary level of skill in the art would have been motivated to combine all of these dialdehydes in the same antimicrobial composition because dialdehyde functionalities are known to possess potent antibiotic properties as taught by Duran-Patron. To clarify, Applicants respectfully submit that Duran-Patron more precisely discloses that most dialdehydes possess "*potent bioactivities*", not "*potent antibiotic properties*".

Furthermore, the compounds of claim 1 are effective at killing mycobacterium. The reference "*Sterilization or Disinfection of Medical Devices*", which is included herewith as Attachment 1 (two pages), discusses killing bacterium.

"There are three levels of disinfection: high, intermediate, and low. High-level disinfection kills all organisms, except high levels of bacterial spores, and is effected with a chemical germicide cleared for marketing as a sterilant by the Food and Drug Administration. Intermediate-level disinfection kills mycobacteria, most viruses, and bacteria with a chemical germicide registered

Atty Docket No. 56301P5007
Application No. 10/769,598

9

as a "tuberculocide" by the Environmental Protection Agency (EPA) (emphasis added). Low-level disinfection kills some viruses and bacteria with a chemical germicide registered as a hospital disinfectant by the EPA".

Killing mycobacterium is a difficult task that is practically met by high-level disinfectants and intermediate-level disinfectants, but not by low-level disinfectants. There are relatively few known dialdehydes that meet the criteria of intermediate-level disinfectants or better. Simply put, there are literally hundreds of dialdehydes, but very few of these dialdehydes are practically useful for killing mycobacterium.

Duran-Patron simply does not teach or suggest that most dialdehydes are effective at killing mycobacterium. Furthermore, it is well established that even though compounds may have similar functional groups, for example two aldehyde groups, the compounds may nevertheless have drastically different properties. As stated in Duran-Patron, "*small structural changes may modulate the biological activities considerably*" (see e.g., Introduction at page 2389). Even among the structurally similar compounds investigated in Duran-Patron, the activities were found to be quite "*diverse*" and the differences to be "*dramatic*". See e.g., the bottom of page 2393. Even small structural changes had dramatic reductions in antibiotic properties and made some of the compounds "inactive".

Applicants respectfully submit that such dramatic changes in antibiotic activities for relatively small structural changes in structurally closely related compounds is indicative of a substantial degree of unpredictability. The degree of unpredictability would likely be even greater, if greater structural changes were made. Furthermore, the structural dissimilarity between the compounds of claim 1 and the compounds investigated by Duran-Patron are very considerable, and the Examiner has not cited a compound structurally similar to those of claim 1 but known to be effective at killing mycobacterium.

Accordingly, it is simply unreasonable and inappropriate to assume, based on Duran-Patron, that there is any reasonable expectation of success that any given dialdehyde, of the large number of possible dialdehydes, would be effective at killing mycobacterium.

Accordingly, Applicants respectfully submit that Klimko should not be combined with either of Yagi, Bratescu, or Duran-Patron.

RECEIVED
CENTRAL FAX CENTER

OCT 16 2006

Conclusion

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance. Applicants respectfully request that the rejections be withdrawn and the claims be allowed at the earliest possible date.

Request For Telephone Interview

The Examiner is invited to call Brent E. Vecchia at (303) 740-1980 if there remains any issue with allowance of the case.

Request For An Extension Of Time

The Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17 for such an extension.

Charge Our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: 10-16-06

Brent E. Vecchia

Brent E. Vecchia
Reg. No. 48,011

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025-1030

Atty Docket No. 56301P5007
Application No. 10/769,598

12